

CLAIMS

1. A touch panel display for a handheld device comprising:

5 a) at least one electrically active transparent element having a first surface and a second surface;

b) a transparent conductive coating disposed on a portion of said first surface;

10 c) a non-transparent conductive pattern disposed on said first surface wherein said non-transparent conductive pattern is electrically coupled to said transparent conductive coating; and,

15 d) a dielectric material disposed on at least a portion of said first surface adjacent to said non-transparent conductive pattern, wherein the coloration of said non-transparent conductive coating and the coloration of said dielectric material are substantially indistinguishable when viewed through said second surface.

20 2. The touch panel display of claim 1 wherein said non-transparent conductive coating comprises a material selected to provide coloration.

3. The touch panel display of claim 1 wherein said dielectric material comprises a material selected to provide coloration.

5 4. The touch panel display of claim 3 wherein said non-transparent conductive coating comprises a material selected to provide coloration.

10 5. The touch panel of claim 1 wherein said touch panel display is a resistive touch panel display.

6. The touch panel of claim 1 wherein said touch panel display is a near field imaging touch panel display.

15 7. A carrier frame for use in a handheld device with a touch panel display, said carrier frame comprising at least one frame contact having an upper end and a lower end; wherein said upper end resides at least in part within the touch panel display mounting surface and said lower end is
20 electrically accessible by circuits resident within the confines of said frame.

8. The carrier frame of claim 7 wherein said carrier comprises a dielectric insert block.

9. The carrier frame of claim 8 wherein said carrier
5 frame comprises a metal.

10. The carrier frame of claim 7 wherein said frame contact is press fit.

10 11. The carrier frame of claim 7 wherein said frame contact is molded into said carrier frame.

12. The carrier frame of claim 7 comprising a plurality
of frame contacts distributed over said touch panel display
15 mounting surface.

13. A handheld device comprising a touch panel display,
said touch panel display comprising a visible non-transparent
conductive pattern adjacent to a visible adhesive dielectric
20 spacer, wherein said visible non-transparent conductive
pattern and said adhesive dielectric spacer are visually
homogeneous.

14. The handheld device of claim 13 further comprising a carrier frame, wherein an electrical contact to said touch panel display is established at the interface between the mounting surface of said carrier frame and said touch panel display.

15. The handheld device of claim 14 wherein said electrical contact to said touch panel display is established using an anisotropic conductive film.

16. The handheld device of claim 14 wherein said electrical contact to said touch panel display is established using an anisotropic conductive adhesive.

17. The handheld device of claim 15 wherein said carrier frame further comprises a protective rim.

18. The handheld device of claim 17 wherein said touch panel display is a near field imaging display.

19. The device of claim 15 wherein said touch panel display is a resistive touch panel display.

20. The device of claim 19 wherein said carrier frame further comprises a protective rim.

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